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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,238	12/22/2006	Masato Tanaka	4035-0177PUS1	4126

2292 7590 10/08/2008  
BIRCH STEWART KOLASCH & BIRCH  
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FALLS CHURCH, VA 22040-0747

EXAMINER
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MANCUSO, HUEDUNG XUAN CAO

ART UNIT	PAPER NUMBER
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2821

NOTIFICATION DATE	DELIVERY MODE
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10/08/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/577,238	<b>Applicant(s)</b> TANAKA ET AL.	
	<b>Examiner</b> HUEDUNG Cao MANCUSO	<b>Art Unit</b> 2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/26/06, 12/22/06</u> .                                       | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the phrase “the ground conductor are nearly cloth-like substances” because it is not clear what it meant by nearly.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka (JP 2003-258539).

As to claim 1, a microstrip antenna equipped with a nearly flat plate-like radiating conductor 14, a nearly flat plate-like ground conductor 12 having larger area than the radiating conductor, and a dielectric substrate 13 set between the radiating conductor and the ground conductor, and one terminal of a feeding cable 16 is connected to the radiating conductor, and

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the other terminal is connected to the ground conductor, which microstrip antenna is characterized that the radiating conductor and the ground conductor are nearly cloth-like substances having flexibility and conductivity, and also the dielectric substrate is a nearly cloth-like substance having flexibility and insulation property, and the connection of the terminal of the feeding cable to the radiating conductor or the ground conductor is attained by soldering through a conductive medium see (paragraphs [0004-0008]). It is noted that Tanaka does not explicitly disclose that the radiating conductor and the ground conductor are nearly cloth-like substances. However, Tanaka discloses that the radiating conductor and the ground conductor are lightweight and flexible, wrinkles do not produce it mostly, and it aims at considering it as the wearable antenna which can be sewn on dress, a hat, etc.

As to claims 2, 4, 6, 7, 10, 11, 12, wherein the conductive medium is a metallic plate-like substance adhered with conductive adhesives at a surface opposing to the radiating conductor or the ground conductor; wherein the conductive medium is a metal coating set on the heat resistant radiating conductor or the ground conductor; the microstrip antenna according to any one of claims wherein the terminal of the feeding cable connected to the radiating conductor is a core wire which is an inner conductor of the feeding connector, as well as the terminal of the feeding cable connected to the ground conductor is an outer conductor of the feeding connector, and the core wire passes through a pore part set in the ground conductor, and connected to the radiating conductor without contacted with the ground conductor; wherein the radiating conductor or the ground conductor is a cloth woven or compressed with a synthetic resin; wherein the dielectric substrate is made of felt; wherein the dielectric substrate is made of clothing fabric; cloth

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attached with a microstrip antenna, characterized that the microstrip antenna is attached at the exterior surface of the clothes see (paragraph [0009-0010]).

As to claims 3, 5, 8, 9, wherein the metallic plate-like substance is made of copper as a main component; wherein the metal coating is made of copper as a main component; wherein the cloth is woven or compressed by a polyester fiber which is coated with copper and covered with a surface nickel layer on the copper coating; wherein the cloth is woven or compressed by an aramid fiber which is coated with copper and covered with a surface nickel layer on the copper coating which Tanaka does not explicitly disclose. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to select the material of the metal plate to be of copper, or cloth is woven, polyester, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUEDUNG Cao MANCUSO whose telephone number is (571)272-1939. The examiner can normally be reached on 6:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Owens can be reached on (571) 272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Huedung Cao Mancuso/  
Examiner, Art Unit 2821